

- (6) pesticides;
- (7) organotin compounds;
- (8) estrogens; or
- (9) mirex, toxaphene, aldicarb or kepone;

5 [5] a method for detecting a substance that potentially causes endocrine disruption, characterized in which the method comprises:

10 preparing a nucleic acid sample containing mRNAs, or cDNAs therefor, derived from a cell, a tissue or an organism which has been exposed to a sample that is suspected to contain a substance that potentially causes endocrine disruption;

15 hybridizing the nucleic acid sample with a DNA array onto which genes which are influenced by an endocrine disruptor or DNA fragments derived from the genes which are influenced by the endocrine disruptor are immobilized; and

detecting a substance that potentially causes endocrine disruption by comparing the results with results for a nucleic acid sample prepared using a control sample;

20 [6] the method according to [5] above, wherein the substance that potentially causes endocrine disruption is classified into:

- (1) dioxins;
- (2) organochlorine compounds;
- (3) phenols;

- (4) phthalate esters;
 - (5) aromatic hydrocarbons;
 - (6) pesticides;
 - (7) organotin compounds;
 - 5 (8) estrogens; or
 - (9) mirex, toxaphene, aldicarb or kepone;
- [7] a DNA array for detecting a gene that is influenced by an endocrine disruptor, onto which a gene that is influenced by an endocrine disruptor or a gene that is potentially influenced by an endocrine disruptor, or a DNA fragment derived from the gene is immobilized;
- [8] the DNA array according to [7] above, onto which a gene selected from the group consisting of:
- (1) a gene for a nuclear receptor or a gene related to nuclear receptor transcriptional coupling;
 - 15 (2) a gene related to kinase-type signal transduction;
 - (3) a gene related to gonad differentiation;
 - (4) a gene for or related to a receptor-type kinase;
- 20 (5) a gene for or related to an intermediate filament marker;
- (6) a gene related to cell cycle or growth regulation;
 - 25 (7) an oncogene, a gene related to an oncogene or

a gene related to tumor suppression;

(8) a gene related to apoptosis;

(9) a gene related to damage response, repair or recombination of DNA;

5 (10) a gene for or related to a receptor;

(11) a gene related to cell death or differentiation regulation;

(12) a gene related to adhesion, motility or invasion of cell;

10 (13) a gene related to angiogenesis promotion;

(14) a gene related to cellular invasion;

(15) a gene related to cell-cell interaction;

(16) a gene for or related to a Rho family, GTPase or a regulator therefor; and

15 (17) a gene for or related to a growth factor or a cytokine,

or a DNA fragment derived from the gene is immobilized; and

[9] the DNA array according to [7] or [8] above, wherein the gene or the DNA fragment derived from the gene
20 is immobilized onto a slide glass.

Detailed Description of the Invention

(1) The method for detecting a gene that is influenced by an endocrine disruptor of the present invention